Subject Matter Code: C-22 Dissolved v. Ttl Recoverable

Comment ID: CTR-004-004c
Comment Author: South Bayside System Authority
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES G-05
C-24a
C-09

Comment: Despite the problems addressed above there are provisions of the CTR that SBSA supports, including:

* EPA's policies and guidance regarding the use of mixing zones and dilution

* Use of water effects ratios (WERs) for determining site specific criteria

* Inclusion of metals criteria expressed as dissolved rather than total recoverable

* Allowing permit writers the use of any of the methods in EPA's guidance document on the use of translators

Response to: CTR-004-004c

EPA acknowledges the commenter's support.

Comment ID: CTR-005-003a
Comment Author: Novato Sanitary District
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/23/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? Y
CROSS REFERENCES C-24a
C-01a
G-09
G-05
G-04

Comment: 2. The following provisions of the rule are supported: (1) adoption of metals criteria as

dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury; and (4) the Preamble discussions regarding metals translators, mixing zones, and interim permit limits.

Response to: CTR-005-003a

EPA acknowledges the commenter's support.

Comment ID: CTR-007-001
Comment Author: Port of San Diego
Document Type: Port Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: The San Diego Unified Port District ("District") supports the general shift from a "Total Recoverables" criterion to a "dissolved" detection method. The District does, however, have a number of concerns with the proposed rule.

Response to: CTR-007-001

EPA acknowledges the commenter's support.

Comment ID: CTR-017-002a
Comment Author: Santa Ana River Discharger Ass
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? Y
CROSS REFERENCES C-24a

Comment: Because the California Toxics Rule uses the same approach as the UAA in setting water quality objectives for cadmium and copper, SARDA strongly supports the CTR objectives for those metals. We also agree with EPA's written statements acknowledging the binding character of organic carbon and the role it plays in rendering heavy metals non-toxic. We enthusiastically endorse the agency's decision to include Water Effects Ratio as a formal factor to be considered when formulating water quality objectives. It will do much to adjust national criteria to local conditions.

Response to: CTR-017-002a

EPA acknowledges the commenter's support.

Comment ID: CTR-021-002c
Comment Author: LeBoeuf, Lamb, Green & MacRae
Document Type: Local Government
State of Origin: CA
Represented Org: City of Sunnyvale
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References: Letter CTR-021 incorporates by reference letter CTR-035
Attachments? Y
CROSS REFERENCES G-04
C-24a
K-01
G-05
G-02

Comment: Sunnyvale is very supportive of many fine concepts advanced in the proposed CTR, and we join with CASA/Tri-TAC in complimenting the Agency on its proposed positions with regard to such matters as: (a) the use of interim effluent limitations in NPDES permits during the pendency of TMDL and other special studies; (b) the allowance of water effects ratios in adjusting the criteria for metals without the necessity for additional rulemaking to establish site-specific objectives; © the use of the dissolved state for the metals criteria; (d) the use of cooperative, intergovernmental, and stakeholder-involved approaches towards the development of TMDLs;(e) the allowance of dilution for both chronic and acute pollutants; and (f) the allowance of compliance schedules in NPDES permits.

Response to: CTR-021-002c

EPA acknowledges the commenter's support.

Comment ID: CTR-026-004
Comment Author: Cal. Department of Fish & Game
Document Type: State Government
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: 4. DISSOLVED V.S. TOTAL RECOVERABLE METALS CRITERIA

The proposed CTR promulgates the metals criteria as dissolved concentrations instead of the historic use of total recoverable concentrations. The DFG has argued against the use of dissolved concentrations as we believe that they do not rally protect aquatic resources. Chemical constituents of natural waters

affect the biota as essential nutrients and as potential toxicants. These interactions are directly dependent on the chemical speciation of the constituents. While it is generally recognized that only the free concentrations of metals are the toxic component, most laboratories do not have the capability to determine the speciation of the metal. Use of only the dissolved fraction to determine criteria promotes the theory that metals adsorbed to sediments or suspended solids are not biologically available. Additionally, not all species of metal which are detected in the dissolved fraction are biologically available.

Metal complexes in natural waters can be classified into three groups: ion pairs, inorganic complexes, and organic complexes. Complex formation is a reversible reaction of two dissolved species to form a third specie. Free metal ions in solutions are really aquo complexes, the water itself is a ligand that binds metals, and every complexation reaction in water is effectively aligand-exchange reaction. The reaction of a metal with a ligand can be of an electrostatic or covalent nature or both. Speciation tells the fate of metals in the environment (mineral, redox, or bioavailable).

Particulate material is chemically defined as that material retained on a 0.2 u filter. The dissolved fraction is that portion smaller than 5 rim in size, and the colloidal fraction is between 5.0 um and 0.2 um in size. The EPA definition of particulate material is that material retained on a 0.45 um filter. Therefore, inorganic and organic complexed material will be contained in the dissolved fraction. A large portion of the dissolved nickel in south San Francisco Bay is organically complexed (not bioavailable) and remains in the water column for longer than the resident time of the water mass. Currently, most laboratories that will be affected by the proposed change from total recoverable concentrations will not be able to speciate out the free ions from the inorganic ligands and determine the true toxic concentrations of the metal. For example, at a 10E-9 concentration, free copper becomes toxic to aquatic organisms. A single laboratory using the same analytical method, but different analytical conditions, can have different detection windows which provide different speciation information.

Metals retained in the particulate fraction are available to aquatic organisms during the chemical processes of desorption from suspended particles, resuspension via wind mixing and tidal currents, and interstitial-water transport, In addition, the biological processes of ingestion of sediment or suspended solids (e.g., filter feeders, zooplankton, etc.), direct contact transport, and bioaccumulation through the food chain, provide organisms bioavailable metals which are currently retained in the particulate fraction. Average concentrations of particulates are 0.01 ppm in the deep ocean, 10-400 ppm in San Francisco Bay, 50,000 ppm in turbid estuaries, and up to 80 percent in riverine systems. Metals bound to humic acids (freshwater systems) readily dissociate and do not bind for any length of time. In San Francisco Bay, the various forms of selenium are not in equilibrium (surface sediment, water column) and the routes of exposure are additive.

Since the measurement of metals as total recoverable includes that portion associated with sediments or suspended solids, it provides a more accurate (although conservative) descriptor of metal availability in its toxic form. As previously discussed, metals associated with the particulate fraction are available to aquatic organisms through biological and chemical mechanisms. It is now known that metals associated with particulates do not remain permanently associated with the sediments, but rather are transformed into the free ions and become bioavailable. Therefore, the DFG urge the establishment of metal criteria as a total recoverable measurement, at least for the purpose of developing statewide numeric criteria for priority toxic pollutants.

Response to: CTR-026-004

EPA disagrees with the commenter. EPA believes that the scientific evidence indicates that

particulate-bound metals do not contribute toxicity when suspended in the water column, and do not increase in bioavailability if or when settled into sediment. Consequently, EPA believes that to incorporate total recoverable metal criteria into the rule would be an ineffective use of federal, state, and local resources EPA notes that two expert workshops, one in Annapolis in 1993 (58 FR 32131, June 8, 1993) and one in Pensacola in 1996 (Bergman, H.L. and E.J. Dorward-King (eds.), Reassessment of Metals Criteria for Aquatic Life Protection. SETAC Press. Pensacola, FL.. 1997) were held to discuss this issue. Both workshops recommended that EPA express its criteria as dissolved metal. EPA has found the expert workshop recommendations, with their supporting rationale, to be persuasive.

EPA does not believe that the factual material cited in the comment supports the contention that criteria should be expressed as total recoverable. The information provided in the comment merely indicates that metals exist in both dissolved and particulate forms, and that one can conceive of some potential exposure routes involving particulate metals. However, none of the information provided by the comment suggests that particulate potential exposure routes are in fact actually significant when compared to dissolved metals exposure. Consequently, EPA does not believe that any of the information presented in the comment counterbalances the information provided by the above mentioned workshops, supporting use of dissolved metals criteria.

EPA nevertheless agrees with the comment that not all dissolved metal is bioavailable. For this reason, EPA included the Water-Effect-Ratio (WER) in the equation for criteria in the rule to account for varying site-specific toxicity.

Comment ID: CTR-027-012a
Comment Author: California SWQTF
Document Type: Storm Water Auth.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References: Letter CTR-027 incorporates by reference letters CTR-001, CTR-036 and CTR-040
Attachments? N
CROSS REFERENCES C-24a
C-01a
G-09
G-05

Comment: PROVISIONS OF THE PROPOSED RULE WE SUPPORT

Not withstanding the above comments, we believe there are certain elements of the proposed rule with respect to establishing water quality standards that we can support:

* Metal criteria expressed in the dissolved fraction rather than expressed in the total recoverable fraction.

* Metal criteria that are developed as a function of the water-effect-ratio (WER).

* The current proposed human health criterion for mercury.

* The current preamble language regarding metal translators and mixing zones.

We believe the above provisions provide a more acceptable, scientific approach to the water quality-based pollution control approach. We recommend these provisions of the current rule remain as proposed.

Response to: CTR-027-012a

EPA acknowledges the commenter's support.

Comment ID: CTR-029-002d
Comment Author: Center for Marine Conservation
Document Type: Environmental Group
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES C-17a
C-17b
A
C-27
C-29

Comment: The Center for Marine Conservation (CMC) is a nationwide, nonprofit advocacy group dedicated to the conservation and enhancement of coastal and ocean life and resources. CMC submits these comments on behalf of its 16,000 members in California and over 120,000 members nationwide.

CMC applauds EPA's efforts to bring California into compliance with the Clean Water Act 303(c)(2)(B). Implementing numeric criteria that will protect the beneficial uses of California's waters is of great importance to the health of coastal and marine ecosystems, and so to CMC and its members. The reliance in many areas of the state on narrative criteria threatens the health of most of the state's waters, thereby impacting both human health and the health of the state's economy that relies on clean water.

While CMC strongly supports the swift adoption of an Enclosed Bays and Estuaries Plan and an Inland Surface Waters Plan that contain numeric criteria for toxic pollutants, CMC also is concerned that many of the specific criteria contained in the proposed rule are weaker than those contained in published guidance. CMC also believes that the proposed rule can better protect certain subpopulations from harm caused by consumption of contaminated fish and shellfish. Finally, CMC is concerned that the economic analysis of the proposed rule over-emphasizes costs and under-reports the many benefits of improving water. quality throughout the state. These three points are reviewed below.

In Light of Significant Threats to Water Quality, the Proposed Rule Should Contain the Most Stringent Criteria That Are Scientifically Defensible

Many of the criteria in the proposed rule are weaker than criteria in current published guidance. The proposed rule summarily states that the difference between the proposed, weaker criteria and the

published guidance documents is "insignificant"(*4); however, in light of the current contamination problems in California's waters today, any move backwards, particularly when spread out over the state, must be viewed as significant.

Any weakening of the criteria should be subject to close scrutiny and the most rigorous analysis, which the proposed rule itself does not do. Among other things, the criteria in the proposed rule may be under protective because additive and synergistic effects were not considered; and because the effects on wildlife, which can be particularly significant for bioaccumulative chemicals, were ignored.(*5) In addition, the proposed rule contains dissolved rather than total recoverable metals criteria, despite the fact that EPA acknowledges that total recoverable metals criteria are "scientifically defensible" and that they are more protective than dissolved metals criteria because they consider "sediment, food-chain effects and other fate-related issues," rather than simply water column impacts.(*6)

Clean Water Act section 303(c)(2)(B) mandates the development of numeric criteria that will "support such designated uses [that are adopted by the State]." The statistics available on the health of the state's waters indicates that their use already is significantly threatened or impaired by toxics. The strongest criteria supportable by science are necessary to reverse this trend and begin to restore the state's waters.

(*4) 62 Fed. Reg. 42159, 42168 (Aug. 5, 1997).

(*5) Id. at 42168.

(*6) Id. at 42172.

Response to: CTR-029-002d

See response to CTR-029-002b.

Comment ID: CTR-032-002b
Comment Author: Las Gallinas Val. Sanitry Dist
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References: Letter CTR-032 incorporates by reference letter CTR-035
Attachments? N
CROSS REFERENCES G-01
G-09
C-24a
C-24
K
G-04
G-05
G-02

Comment: Regulatory Flexibility and Relief

The District supports EPA's use of "sound science" and current data in developing the proposed criteria in the California Toxics Rule (CTR). The District strongly supports language in the Preamble that references and endorses recommendations of the State Task Forces including use in permitting of:

* reasonable potential analyses * dissolved metals criteria * translators * water effects ratios * site specific objectives * innovative TMDL processes such as effluent trading * performance based interim limits * chronic and acute mixing zones, and * compliance schedules in NPDES permits.

Response to: CTR-032-002b

EPA acknowledges the commenter's support.

Comment ID: CTR-034-008
Comment Author: SCAP
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References: Letter CTR-034 incorporates by reference letter CTR-035
Attachments? N
CROSS REFERENCES

Comment: * SCAP supports EPA's proposed adoption of criteria for metals expressed as the dissolved fraction rather than as total recoverable metals. We recommend that EPA provide guidance to the State in the Preamble to the CTR stating that the State should also use the dissolved form for metals unless it has been demonstrated that the total recoverable form is necessary to protect aquatic resources found in particular water bodies.

Response to: CTR-034-008

EPA acknowledges the commenter's support for the use of dissolved metals. However, EPA disagrees that it should provide guidance indicating that the State should also use the dissolved form of metals. EPA believes that a state can decide to use a more stringent approach.

Comment ID: CTR-035-002a
Comment Author: Tri-TAC/CASA
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES C-01a
C-08a

G-05
G-04
G-09
K-01
C-24a

Comment: Second, we commend EPA for its inclusion in the CTR of several innovative and flexible regulatory approaches, such as metals criteria expressed as dissolved rather than total recoverable concentrations, and the revised human health criterion for mercury. In addition, in light of the issues surrounding the human health criteria for arsenic we support EPA's decision not to promulgate human health criteria at this time. With respect to implementation issues discussed in the Preamble, we support EPA's policies and guidance regarding the application of mixing zones and dilution credits. the use of interim permit limits while Total Maximum Daily Loads (TMDLs) and other special studies are being performed, and EPA's guidance to Regional Water Quality Control Boards (RWQCBs) that they may use any of the methods described in EPA's guidance document on the use of translators. We also support EPA's proposal to create a rebuttable presumption for Water Effects Ratios (WERs), allowing the RWQCBs and SWRCB to develop site-specific WERs that can be approved by EPA during the NPDES permit approval process. We believe that this approach will help facilitate the development of appropriate site-specific adjustments for metals criteria.

Response to: CTR-035-002a

EPA agrees with the comment and acknowledges the commenter's support.

Comment ID: CTR-035-016
Comment Author: Tri-TAC/CASA
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: pp. 42171-42173 -- Dissolved Metals Criteria We support EPA's policy regarding the expression of criteria for metals as the dissolved fraction, rather than as total recoverable metals. We believe that the dissolved fraction more closely approximates the fraction that is bioavailable, and that metals criteria expressed as total recoverable are usually overprotective. We request that EPA include guidance to the State in the Preamble such that, if the State wishes to adopt metals criteria in the total recoverable form, the State must demonstrate, for the particular water bodies, why the total recoverable form is necessary to protect the aquatic resources.

Response to: CTR-035-016

See response to CTR-034-008.

Comment ID: CTR-038-002a
Comment Author: Sonoma County Water Agency
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? Y
CROSS REFERENCES C-24a
C-01a
G-04
G-05
G-09

Comment: 2. The following provisions of the rule are supported (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury; and (4) the Preamble discussions regarding metals translators, mixing zones, and interim permit limits.

Response to: CTR-038-002a

EPA acknowledges the commenter's support.

Comment ID: CTR-039-003a
Comment Author: San Francisco BayKeeper
Document Type: Environmental Group
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES A

Comment: I . APPLYING DISSOLVED METALS CRITERIA AS PROPOSED VIOLATES THE ANTIDEGRADATION POLICY FOR SAN FRANCISCO BAY AND OTHER WATERS OF THE STATE

The practical effect of EPA's decision to rely on dissolved metals criteria is to allow higher levels of total recoverable metals to be discharged from point sources into San Francisco Bay as well as other waters of the State. Since 1991, many permits in the Bay area and else where have been issued applying the State Water Resources Control Board's technically-based and EPA approved numeric criteria for numerous toxic pollutants. For at least three years, permits throughout the State were required to be issued using the duly-promulgated criteria established by the State Water Resources Control Board ("SWRCB"). After the Sacramento court vacated the criteria on economic grounds, numerous permitting decisions were made by local regional boards and their staffs applying the previously applicable standards using

their best professional judgement ("BPJ") in order to assure the protection of beneficial uses. Each of the permitting decisions based directly or deferentially on the SWRCB's criteria would be more stringent than permits for the same parameters authorized by EPA's proposed rule where a discharger opts to follow the Water Effects Ratio protocol for translating the criteria into a permit limit. BayKeeper would not anticipate that many, if any, dischargers will opt for the default WER of 1.0. Thus, for many regulated dischargers, EPA's proposal will lead to major increases in the total metals they are allowed to discharge into the Bay and other waters of the State. This massive increase in the total pollution proposed to be allowed to be discharged into the Bay and other State waters is completely inconsistent with the State's and EPA's antidegradation policies mandating that existing water quality be maintained and protected. As the State's policy sets forth:

Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

SWRCB Resolution No. 68-16. Under the federal version of the policy:

[w]here the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development.

40 C.F.R. 131.12(a)(2). The antidegradation policies apply both to permit decisions as well as decisions establishing water quality standards. See, e.g., In The Matter of the Petition of Remmon C. Fay, SWRCB Order No. WQ 86-17 (Nov. 20, 1986). In the case of EPA's proposed rule, throughout California the rule, if adopted, will allow more pollution to be discharged than is currently allowed by permits validly issued to numerous dischargers throughout the State without any consideration of the policies, including the intergovernmental coordination and public participation requirements, required by the antidegradation policies.

Of course, in addition to that procedural problem, BayKeeper is opposed to the proposed reliance on dissolved numbers, especially in the Bay area, because it will in fact allow more pollution to be discharged into the State's waters than is currently allowed today and likely will prove detrimental to beneficial uses. See Comments of Communities For A Better Environment. BayKeeper also is very concerned about the burdens and uncertainty placed on the public by the need for translators in order to apply the dissolved criteria in permit limits that must be based on total recoverable numbers. As noted above, BayKeeper does not anticipate that many dischargers will opt for EPA's proposed WER default of 1.0 BayKeeper views this proposal as an invitation for dischargers to prepare site-specific limitations based on their own studies which will frustrate the public' s ability to participate effectively in the formulation of effluent limits. Further, the proposal will present a moving target for the public to understand and will burden the resources of regional board staff to a degree that may undermine the quality of those site by site determinations.

Response to: CTR-039-003a

EPA does not agree that the criteria adopted by the rule in any way violate antidegradation policies. State and federal antidegradation requirements must still be met. EPA believes that the commenter may

have confused antidegradation concerns with anti-backsliding concerns. Anti-backsliding is a permit issue, not a water quality standards regulatory issue.

EPA also does not agree that use of dissolved metals will prove detrimental to beneficial uses. The commenter provides no evidence to support its assertion, and EPA is not aware of such evidence. EPA acknowledges that the complexity of metals criteria application, which stems from the problem that the same concentration of a metal yields different toxicity in different waters, makes it more difficult for non-experts to understand and participate in the formulation of effluent limits. However, EPA believes that incorporation of the dissolved provision and the water-effect ratio provision is necessary for defense of the scientific validity of most of the metals criteria.

Comment ID: CTR-041-002
Comment Author: Sacramento Reg Cnty Sanit Dist
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: The District's comments on the proposed CTR are as follows:

1. Items Generally Supported by the District

The District supports a number of the provisions of the proposed rule. That support, however, varies from strong in some cases to a level of grave reservations in other cases. First, the District strongly supports the use of dissolved metals criteria rather than the use of total recoverable metals criteria. The continued use of the dissolved metals approach is a prime example of making a good recommendation based not only on the most recent sound scientific data, but also on the results of both intense national public input and court decisions.

Response to: CTR-041-002

EPA acknowledges the commenter's support.

Comment ID: CTR-041-007b
Comment Author: Sacramento Reg Cnty Sanit Dist
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES C-01a

Comment: 2. Additional Strong Reasons to Maintain use of Dissolved Metals and Mercury Criteria

The District also has significant economic reasons to support the use of dissolved metals and the updated mercury criteria. Previous District studies have shown that adoption of metal criterion as total recoverable would cost the District more than $50 million a year while reducing metal loads in the Sacramento River by several percent. Likewise, if old mercury criteria were adopted it would cost the District over $100 million a year while reducing mercury loads in the Sacramento River by several percent.

Response to: CTR-041-007b

EPA acknowledges the commenter's support.

Comment ID: CTR-042-006
Comment Author: Cal. Dept. of Transportation
Document Type: State Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? Y
CROSS REFERENCES

Comment: 6. The CTR should maintain many of the proposed provisions relating to metals criteria.

Caltrans supports the EPA's decision to include metals criteria expressed as dissolved instead of total recoverable; the development of metals criteria as a function of the Water Effect Ratio (WER); the current proposed human health criterion for mercury; and the use of metals translators and mixing zones. Caltrans is of the opinion that these provisions reflect a more sound scientific approach to regulating metals.

Request: Caltrans requests that the provisions described in the preceding paragraph be maintained in the final draft of the CTR.

Response to: CTR-042-006

EPA agrees with the comment and has maintained the provisions.

Comment ID: CTR-043-002a
Comment Author: City of Vacaville
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97

Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? Y
CROSS REFERENCES C-24a
C-01a
G-04
G-05
G-09

Comment: 2. The following provisions of the rule are supported: (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury; and (4) the Preamble discussions regarding metals, translators, mixing zones and interim permit limits.

Response to: CTR-043-002a

EPA acknowledges the commenter's support.

Comment ID: CTR-044-003a
Comment Author: City of Woodland
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? Y
CROSS REFERENCES C-24a
C-01a
G-09
G-05
G-04

Comment: We have reviewed the proposed CTR and offer the following comments:

2. The following provisions of the rule are supported:

(1) adoption of metals criteria as dissolved concentrations;

(2) expression of the metals criteria as a function of the water-effect ratio;

(3) adoption of the proposed new human health criteria for mercury; and

(4) the Preamble discussions regarding metals translators, mixing zones, and interim permit limits.

Were the old human health criterion for mercury (0.012 ug/ l) to be adopted, the City would have to remove its discharge from Tule Canal and go to land disposal. The capital cost to do this would be $22.1 million and the total present worth cost would be $23.1 million (see Exhibit B, Required Capital

improvements and Costs for Beryllium and Mercury). This would translate to an annual cost of $3.1 million per year (at 7% over 10 years) and would require that monthly sewer service charges be increased by more than 100%.

Response to: CTR-044-003a

EPA acknowledges the commenter's support.

Comment ID: CTR-045-004
Comment Author: Sausalito-Marin Sanitary Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? Y
CROSS REFERENCES

Comment: The District supports many of the items included in the proposed CTR:

The inclusion of metals criteria expressed as dissolved rather than total recoverable concentrations.

Response to: CTR-045-004

EPA acknowledges the commenter's support.

Comment ID: CTR-052-002a
Comment Author: East Bay Dischargers Authority
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References: Letter CTR-052 incorporates by reference letters CTR-035 and CTR-054
Attachments? Y
CROSS REFERENCES C-01a
G-09
G-05
G-04

Comment: EPA will recall the State Water Quality Plans Task Forces that included all stakeholders, including EPA. The Authority appreciates the incorporation of many of the consensus recommendations from the Task Forces into the CTR, including:

* Adoption of the metals criteria as dissolved concentrations and the expression of the criteria as a

function of the water-effect ratio

* Adoption of the proposed new human health criterion for mercury

* Preamble discussions regarding metals translators, mixing zones, and interim permit limits

Response to: CTR-052-002a

EPA acknowledges the commenter's support.

Comment ID: CTR-054-002a
Comment Author: Bay Area Dischargers Assoc.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? Y
CROSS REFERENCES C-24a

Comment: BADA supports adoption of the metals criteria as dissolved concentrations and the expression of the criteria as a function of the water-effect ratio. These changes place the metals criteria on a firmer scientific base than the old State Plans. Moreover, previous BADA studies have shown that adoption of the copper criterion as total recoverable could cost Bay Area POTWs several billion dollars while reducing copper loads to the Bay by only several percent (see Attachment 1). Further, building the water-effect ratio into the criteria will lessen the administrative burden on all parties when it becomes necessary to pursue the development of such a ratio. For these reasons, it would not be in the public interest nor consistent with Presidential Order 12866 or the Unfunded Mandates Reform Act to adopt the metals criteria as total recoverable concentrations or to require approval of a site-specific objective whenever a water-effect ratio is developed.

Response to: CTR-054-002a

EPA acknowledges the commenter's support for the use of dissolved metals criteria.

Comment ID: CTR-056-005
Comment Author: East Bay Municipal Util. Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/22/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References: Letter CTR-056 incorporates by reference letter CTR-054
Attachments? N

CROSS REFERENCES

Comment: Second, EBMUD would like to express to EPA it support for inclusion of:

* Metals criteria expressed as dissolved rather than total recoverable concentrations,

Response to: CTR-056-005

EPA acknowledges the commenter's support.

Comment ID: CTR-057-006
Comment Author: City of Los Angeles
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: Metals

We support the EPA's intention to adopt metals criteria that are based on dissolved, rather than total recoverable, fractions in the water column. This provision clears up an issue that seemed straight forward but intractable only a few years ago. This provision will also allow the State to make decisions regarding the use of dissolved or total recoverable on a waterbody-specific basis, which we view as appropriate. The City also supports the proposed Rule with respect to applications of the water effect ratio and metal-translator provision (metal-specific partitioning), even though we do not see an immediate application of the latter with respect to our facilities.

Response to: CTR-057-006

EPA acknowledges the commenter's support.

Comment ID: CTR-058-003
Comment Author: Western States Petroleum Assoc
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? Y
CROSS REFERENCES

Comment: 2. Dissolved Criteria for Metals. WSPA supports the use of metals criteria based on the dissolved species.

EPA has reviewed the science in this area carefully over the past several years and rightly concluded that dissolved species best reflect the bioavailability of heavy metals in the aquatic environment. That is, metals species which are not available or reactive to aquatic life should not be regulated as toxics. This proposed rule is consistent with EPA's thorough review of this issue.

WSPA believes that EPA will follow this approach in assessing whether waters of the state meet water quality standards based on these criteria. That is, the waters should be judged based on the presence of dissolved or bioavailable metals, not total metals.

Response to: CTR-058-003

EPA agrees with the commenter and acknowledges its support.

Comment ID: CTR-065-005
Comment Author: Environmental Health Coalition
Document Type: Environmental Group
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: [INDENT]USE OF DISSOLVED CONCENTRATIONS OF METALS WILL UNDERESTIMATE IMPACTS

EHC does not support the use of dissolved concentrations for metals criteria as it will lead to significant underestimation of levels of contamination. Metals in sediments can be bioavailable or could become bioavailable in the future. EHC recommends the use of total recoverable metals as the appropriate basis for metals.

Response to: CTR-065-005

EPA does not agree. See response to CTR-026-004. EPA does not know of any scientific evidence that indicates that metals loading at the criteria levels would eventually or ultimately yield sediment contamination problems. In addition, EPA does not believe that use of total recoverable metals criteria is an effective or appropriate method for protecting sediments from contamination. Instead of basing metals criteria on total recoverable measurements, EPA is proceeding with the development of Equilibrium Partitioning Sediment Guidelines (ESGs) in order to protect sediments, the contamination of which would generally be related to elevated historical loads rather than to the loads allowed after implementation of this rule. EPA has not found the use of total metal concentrations in sediment to be useful or reliable for expressing ESGs. Rather, EPA has used a measure of the sediment's metal enrichment compared against its metal binding (or detoxifying) capacity. EPA's ESGs ensure that there will not be bioavailable metals by determining that the total extractable metal does not exceed total acid

sulfide concentration in the sediment. The ESGs protect against chronic toxicity to benthic organisms from metals in sediment, and can include effects from exposure through pore water and exposure from ingesting sediment.

Comment ID: CTR-066-005
Comment Author: Delta Diablo Sanitation Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: Our preliminary review of the CTR finds several areas that we believe are positive changes and will enhance the rulemaking. The areas that we support as now written are as follows:

* The inclusion of metals criteria expressed as dissolved rather than total recoverable concentrations.

Response to: CTR-066-005

EPA acknowledges the commenter's support.

Comment ID: CTR-066-019
Comment Author: Delta Diablo Sanitation Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: * The proposed metals limits appear to conflict with our current NPDES permit. This will raise questions of our ability to meet the less stringent standards proposed in the CTR. We assume that these new criteria are more scientifically based than four years ago when we negotiated our NPDES permit. Added treatment will surely be required for the four areas of concern we see in the CTR.

Response to: CTR-066-019

EPA acknowledges the concerns about whether the Sanitation District can attain the criteria without added treatment; however, the commenter does not provide EPA with any evidence to support its contentions.

Comment ID: CTR-067-002
Comment Author: Ojai Valley Sanitary District
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: * OVSD supports EPA's proposed adoption of criteria for metals expressed as the dissolved fraction rather than as total recoverable metals. OVSD recommends that EPA provide guidance to the State in the Preamble to the CTR stating that the State should also use the dissolved form for metals unless it has been demonstrated that the total recoverable form is necessary to protect aquatic resources in a particular water body. This is extremely important because OVSD's current NPDES permit specifies limits for total recoverable metals.

Response to: CTR-067-002

See response to CTR-034-008. Note also that permit limits, per 40 CFR 122.45, must still be expressed in terms of total recoverable metal. When derived from a receiving-water dissolved criterion, total recoverable permit limits are calculated by accounting for the fraction of effluent metal that is or becomes dissolved after discharge.

Comment ID: CTR-077-003
Comment Author: Bay Planning Coalition
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: Dissolved Criteria for Metals

We support the approach that waters should be judged based on the presence of dissolved or bioavailable metals, not total metals, and therefore agree with EPA's conclusion that metals species which are not available or reactive to aquatic life should not be regulated as toxics. We support the use of this approach in assessing whether waters of the state meet water quality standards based on these dissolved species criteria.

Thank you for your consideration of our comments. We look forward to working with EPA and the state in conjunction with the implementation phase of the California Toxics Rule to ensure a well balanced,

feasible and scientifically sound water quality program.

Response to: CTR-077-003

EPA agrees with the commenter.

Comment ID: CTR-081-002d
Comment Author: West County Agency
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES G-04
C-24a
G-02
G-09
C-01a
C-08a
G-05

Comment: * There are many aspects of the CTR that we support. These include: a) Application of interim limits while special studies are performed. b) Approach to water effect ratios for determining site specific criteria. c) Inclusion of provision for compliance schedules. However, this should be modified to allow inclusion of compliance schedules of up to 15 years in permits if deemed appropriate by Regional Boards. d) Metals criteria expressed as dissolved rather than total recoverable concentrations. e) EPA's guidance to Regional Boards regarding use of translators. f) EPA's proposal to create a rebuttal presumption for Water Effects Ratios, g) Revised human health criteria for mercury h) Decision to not promulgate human health criteria at this time in light of issues surrounding health criteria for arsenic. I) EPA's policies regarding application of mixing zones and dilution credits.

Response to: CTR-081-002d

EPA acknowledges the commenter's support with respect to dissolved metals.

Comment ID: CTR-082-003
Comment Author: City of Burbank
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: The subject rule has a significant impact on our facility discharge and the citizens of the City. We therefore present the following comments for your consideration to re-open the comment period for this rule in order to facilitate a more complete review by public and in particular by those in the POTW community:

* Metals criteria be expressed as dissolved fraction rather than total recoverable concentrations.

Response to: CTR-082-003

EPA acknowledges the commenter's support.

Comment ID: CTR-085-006
Comment Author: Camarillo Sanitary District
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: On several aspects of the California Toxics Rule, the District is in agreement with CASA and SCAP comments:

* Inclusion of metals criteria expressed as dissolved rather than total recoverable concentrations.

Response to: CTR-085-006

EPA acknowledges the commenter's support.

Comment ID: CTR-086-004b
Comment Author: EOA, Inc.
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org: California Dent
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References: Letter CTR-086 incorporates by reference letter CTR-035
Attachments? N
CROSS REFERENCES G-01
G-09
C-24a
C-24
K-03

G-04
G-05
G-02

Comment: Regulatory Flexibility and Relief

CDA supports language in the CTR Preamble that references and endorses recommendations of the State Task Forces including in part the use of.

* reasonable potential analyses * dissolved metals criteria * translators * water effects ratios * site specific objectives * innovative TMDL processes such as effluent trading * performance based interim limits * chronic and acute mixing zones, and * compliance schedules in NPDES permits.

Response to: CTR-086-004b

EPA acknowledges the commenter's support.

Comment ID: CTR-089-001a
Comment Author: Las Virgenes Mncpl Water Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES C-01a
C-08a
G-05
K-01
G-02
G-09

Comment: The draft California Toxics Rule (CTR) is clearly the product of substantial effort by USEPA staff, and we applaud this effort and its intent. On several issues of concern to public utilities, the CTR strikes a good balance between the need to promulgate standards and the need to base those standards on sound science. Examples include the use of dissolved concentrations rather than the total recoverable concentrations for metals, the deferral of human health criteria for arsenic until adequate information is available, and the revision of the human health criterion for mercury. We are also pleased with the CTR's guidance and flexibility, on mixing zones and dilution credits, total maximum daily loads (TMDLs), compliance schedules, and translators.

Response to: CTR-089-001a

EPA acknowledges the commenter's support with respect to metals.

Comment ID: CTR-090-002c
Comment Author: C&C of SF, Public Utl. Commis.
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References: Letter CTR-090 incorporates by reference letters CTR-035 and CTR-054
Attachments? Y
CROSS REFERENCES C-17a
C-24a
G-05
G-02
G-04

Comment: There are many features of the proposed rule which we strongly endorse, specifically:

* the use of the latest IRIS values for human health criteria, it is essential that the criteria be based on the latest scientific and environmental information;

* recognition that the dissolved fraction of metals, rather than the total recoverable, better reflect the aquatic toxicity of metals;

* recognition that for certain metals (e.g. copper and zinc) ambient water chemistry is critical in determining toxicity thereby endorsing the Water Effects Ratio;

* recognition and strong endorsement of the multi-tiered mixing zones for acute, chronic and human health effects; and

* recognition of interim limits and compliance schedules as appropriate implementation strategies,

Response to: CTR-090-002c

EPA acknowledges the commenter's support with respect to metals.

Comment ID: CTR-092-002
Comment Author: City of San Jose, California
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References: Letter CTR-092 incorporates by reference letter CTR-035
Attachments? Y
CROSS REFERENCES

Comment: Dissolved Metals Criteria

The City supports the promulgation of dissolved concentration criteria for priority pollutant metals. Dissolved metal more closely approximates the bioavailable fraction, and thus toxicity, of metal in the water column than does total recoverable metal. The City believes there may be specific instances whereby risk management decisions (sediment resuspension, bioconcentration, food web issues) could result in scientifically defensible criteria based upon the total recoverable fraction. The City recommends, that any such decision be established with relevant data, sound science, peer review, and involve active public participation.

Response to: CTR-092-002

EPA agrees with the comment.

Comment ID: CTRH-001-003a
Comment Author: Robert Hale
Document Type: Public Hearing
State of Origin: CA
Represented Org: CA Stormwater Task Force
Document Date: 09/17/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES C-24a
C-1a

Comment: In summing up -- not summing up, just as a parting shot -- I do appreciate the fact that in working up the toxics rule here that EPA has done certain things which in fact we see as improvements in actually making the standards fit with what we think -- have come to see as perhaps the actual impacts of the stormwater part of this. And by that, I'm referring to the dissolved metals criteria and the water effect ratio in there, and the human health criteria revisions for mercury and the other -- the other items.

I appreciate some of the stuff in there, and -- with the exception of the preamble language. And you really need to get that out of there. We're going to pursue this as far as we have to.

I appreciate your hearing me.

Response to: CTRH-001-003a

EPA acknowledges the commenter's support.

Comment ID: CTRH-001-024c
Comment Author: Michelle Pla
Document Type: Public Hearing
State of Origin: CA
Represented Org: S.F. Public Utilities Com
Document Date: 09/17/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable

References:
Attachments? N
CROSS REFERENCES g-02
g-05
c-24a
c-17a

Comment: MS. PLA: My name is Michelle Pla. I'm with the Public Utilities Commission, City and County of San Francisco.

I made the comment on my card that I also said that I would try to be constructive, and so I'm going to follow my mentor here, Phil Bobel, and say that there are some things in this rule that we're very pleased to see.

We're very pleased to see use of the latest scientific information, particularly the use of latest IRIS, I-R-I-S, numbers-for human health. We're very pleased that you're using dissolved versus total recoverable form for the metals.

We're very pleased to see recognition of the water effects ratios. We're pleased to see recognition for a multi-tiered mixing zone for acute and chronic human health effects and hope that the state pays particular attention to that.

We do have a problem with the way you've described compliance schedules and hope to be working strictly by the state on that as well. We think that the five-year system is fairly shortsighted, and -we can't even do FMDSLs in five years.

Response to: CTRH-001-024c

EPA acknowledges the commenter's support with respect to metals.

Comment ID: CTRH-001-032b
Comment Author: Dave Brent
Document Type: Public Hearing
State of Origin: CA
Represented Org: CA Water Qual. Task Force
Document Date: 09/17/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES c-24a
g-5

Comment: I would like to take this time to note that I think it contains some important elements that we agree with and believe are reflective of the impact. These include the uses of dissolved metals and the provisions which will enable the state to use mixing zones and water effects ratios and establish site-specific objectives.

Response to: CTRH-001-032b

EPA acknowledges the commenter's support with respect to metals.

Comment ID: CTRH-001-048
Comment Author: Michael Lozeau
Document Type: Public Hearing
State of Origin: CA
Represented Org: S.F. Bay/Delta Keeper
Document Date: 09/17/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES

Comment: Particularly in regards to the Bay Area, we are concerned with the EPA's reliance on dissolved numbers, on using a dissolved number for the criteria, and believe that total recoverable would be a more appropriate standard to use.

Total recoverable as proposed, from our initial review, it seems to us that we're going to end up with a lot of existing dischargers that will in fact be allowed to discharge more into the bay, where most, or at least first blush looking at it, most of the metals detected in the bay are present in the dissolved stage, probably attached to sediment, which are a large amount of what's in the bay. It seems that these sediments will disattach themselves and then become dissolved some day.

It seems to me this doesn't take a look at the whole picture, and that is basically carving it off. And it seems to me that the process that led to that wasn't one that was available to all of us to discuss.

It was driven by a case in D.C. and some policy decisions made in Washington, D.C., where here all the permits, of course, are total recoverable units. All of the standards to date that have -- that exist or have been proposed are total recoverable.

Response to: CTRH-001-048

See responses to CTR-039-003a, CTR-065-005, and CTR-026-004.

Comment ID: CTRH-001-057f
Comment Author: Dave Tucker
Document Type: Public Hearing
State of Origin: CA
Represented Org: San Jose Env. Serv. Dept.
Document Date: 09/17/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES K-03
C-24a

G-04
G-07
G-09
G-05

Comment: Some of the flexibility that the City highly supports is the water effect ratio investigations to adjust statewide criteria to site-specific conditions; the interim limits concept while special studies are being conducted by the dischargers and other entities; a variance procedure to allow dischargers to achieve progress toward effluent limit attainment without violating applicable water quality standards; dissolved criteria for metals to reflect the toxicological conditions; translators to adjust dissolved criteria to total permit limitations; trading programs to attain and maintain water quality; and a mixing zone that reflects true instream pollutant conditions and that protects beneficial uses.

Response to: CTRH-001-057f

EPA acknowledges the commentor's support with respect to metals.

Comment ID: CTRH-002-011c
Comment Author: Lisa Ohlund
Document Type: Public Hearing
State of Origin: CA
Represented Org: Alliance of So. CA POTWs
Document Date: 09/18/97
Subject Matter Code: C-22 Dissolved v. Ttl Recoverable
References:
Attachments? N
CROSS REFERENCES G-02
G-04
K-01

Comment: Now, I'd briefly like to touch on several issues of importance to SCAP members. In addition, we will be submitting written comments before the close of the public comment period.

I'd like to begin by mentioning our support for several provisions included in the draft CTR, and those include the provision authorizing the use of compliance schedules -- although we don't necessarily agree with the time period -- the expression of metals criteria as dissolved rather than totally recoverable, and discussion in the preamble supporting the use of interim limits in permits, while the total maximum daily loads and other special studies are being performed.

Response to: CTRH-002-011c

EPA acknowledges the commentor's support with respect to metals.

Subject Matter Code: C-23 Sediments/Dredged Materials

Comment ID: CTR-007-002
Comment Author: Port of San Diego
Document Type: Port Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: C-23 Sediments/Dredged Materials
References:
Attachments? N
CROSS REFERENCES

Comment: 1. It is the District's understanding that where sediments exceed the CTR's water quality criteria, the sediment could not be put to a beneficial use after dredging. If this is indeed the case, the District would request that some allowance be given to allow dredged sediments to be put to beneficial use.

Response to: CTR-007-002

The purpose of this rule is to establish numeric criteria for those navigable waters in California that do not have water quality criteria for priority toxic pollutants in place and for which EPA has issued section 304 (a) criteria guidance. Specific implementation procedures regarding the disposal and application of dredged sediments are beyond the scope of the rule. The final CTR does not impact California's ability to designate specific uses, including sub-category of uses that allow for disposal of dredged sediments (e.g., artificial wetlands).

Furthermore, EPA notes that through the state 401 certification process, California would determine whether or not disposal of sediments in a particular instance is consistent with the ambient criteria established in the CTR. In addition, any existing State guidelines for approving beneficial reuse of dredged sediments remain in effect.

Comment ID: CTR-077-001
Comment Author: Bay Planning Coalition
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: C-23 Sediments/Dredged Materials
References:
Attachments? N
CROSS REFERENCES

Comment: A substantial portion of the membership of the Coalition represent the maritime industry which consists of the six public port authorities and one private port, several vessel carriers, dredging contractor companies, maritime trade unions, shippers, and pilots. The industry is dependent on a safe and navigable waterway system maintained by regular dredging so essential to sustain the Bay as an

international center for trade and commerce.

Dredging applicants must apply for permit approval to dredge and dispose of channel sediment from the federal and state dredging regulatory agencies and are required to evaluate the dredged material to be disposed using a suite of chemical, physical and biological tests. The tests we conduct are very expensive. Due to the high cost, uncertainty and inconclusivity of the test results, essential navigation dredging is often delayed at tremendous expense to the Bay public at large.

Numeric Standards for Pollutants as Applied to Dredged Sediment Physical and Chemical Tests

Our primary concern is what effect will the new water quality standards have on the number of and cost for the sediment physical and chemical tests required for dredging permit approval. Will the Toxics Rule standards alter the current protocol contained in jointly signed Public Notice 93-2 entitled, "Testing Guidelines for Dredged Material Disposal at San Francisco Bay Sites"? We have asked the Sediment Management Unit of EPA and the Dredging Regulatory Unit at the S. F. Bay Regional Water Quality Control Board for an assessment of the effect of the Toxics Rule on the current dredging protocol, and we are waiting for a response from them.

We acknowledge that it is the combined results from all tests for dredging (chemical, physical, and biological) which comprise the overall evaluation of potential sediment toxicity and hence acceptability for discharge at unrestricted or restricted disposal sites. In fact the Testing Guidelines indicate that it is the bioassay responses, as indicators of potential toxicity, that will determine the effect of a proposed discharge of dredged material on the receiving aquatic ecosystem, and that the chemistry standards will not be used as pass/fail standards. However, the Guidelines state in the Response to Comments section that, "however, depending on the contaminants of concern and other factors, elevated chemistry could independently indicate the need for more that the routine Tier II testing..." Thus if the water quality standards become more restrictive, then dredging applicants may have to spend more money to conduct more tests.

Further, we are uncertain as to the environmental relevancy of potential lower water quality standards as they may be applied to dredging discharges because there are often false-positive test results between the chemical and biological tests.

Response to: CTR-077-001

See response to CTR-007-002.

The final CTR does not trigger any additional testing of dredged material. The results of any existing testing requirements may be compared to criteria contained in the CTR, but the CTR itself does not address when sediments need to be tested or specify what constituents need to be tested for.

Even under the 404 guidelines, failing WQC does not in itself trigger any additional testing requirements. The process of evaluating dredged material for proposed open water disposal first involves bulk sediment chemistry analysis (required under 404 guidelines for several purposes) and comparison to any applicable numeric criteria (assuming 100% solubility). To evaluate whether or not narrative criteria (e.g., "no toxics in toxic amounts") are met, the elutriate is subjected to standard bioassays (following allowable dilution) regardless of whether or not there are applicable numeric criteria. In the rare instance that the chemistry is projected to exceed a numeric criterion and an elutriate bioassay is passed, additional elutriate chemistry may be required to confirm the numeric criterion failure. But the need for additional chemical evaluation is independent of the criteria used to compare the results. EPA believes there is no

reason to expect more frequent false positives when comparing elutriate chemistry results to CTR criteria than the criteria previously adopted by California.

Furthermore, EPA notes that through the state 401 certification process, California would determine whether or not disposal of sediments in a particular instance is consistent with the ambient criteria established in the CTR. In addition, any existing State guidelines for approving beneficial reuse of dredged sediments remain in effect.

Comment ID: CTRH-001-021
Comment Author: Jim McGrath
Document Type: Public Hearing
State of Origin: CA
Represented Org: Port of Oakland
Document Date: 09/17/97
Subject Matter Code: C-23 Sediments/Dredged Materials
References:
Attachments? N
CROSS REFERENCES

Comment: MR. McGRATH: Good afternoon. My name is Jim McGrath, Environmental Manager for the Port of Oakland. I'm going to testify about a fairly narrow application of the CTR, one not considered and one I think you need to.

The Port of Oakland has built a facility for removal of dredge material from the marine environment. At completion of dredging of about 1 million cubic yards of contaminated sediment, it's pumped into that facility and dried.

The facility has been constructed as a series of ponds, which physically settle the material but do not provide for treatment. The removals in that facility have ranged about 99.98 percent removal or a little better, depending on how it's being operated.

I think the bottom line for it is the permits in terms of the CTR. The standards that were used for discharge from this facility were those of the basin regional board at the time -- in effect at the time. This rule is dangerous due to the limits contained in the CTR, and the nature of the CTR would prevent that operation.

Our discharge limit is 20 parts per million. The CTR would lower that to 3.1 parts per billion. That cannot be met settling fine grain dredge material, clean or dirty, without treatment.

Thus the application of this rule might prevent not only the Galbraith operation, which is intended to and is effectively removing material presently from the marine environment, but could also prevent beneficial use of dredge material that involved a return discharge to the bay. That includes such projects by the Environmental Protection Agency as Sonoma Baylands, already built, and other projects under consideration.

Now, how does that come about? I think the problem is that the rule has been developed under a conceptual mode of input-output. Stuff comes into the bay; it goes out of the bay.

The real world and the real physics is a little more complicated than that. This gets stored in sediment. We dredge -- we in the maritime industry dredge a small amount of what is stored by the dynamic of the contaminant movement in the water column to the sediment bed and back again. That's substantially more complicated than that. Worse than that, the blinders have been put on by the input-output concept, and the thinking is one of a steady state of input-output.

And the rule doesn't contemplate transient impact due to cleanups of some sort and we're particularly concerned about -- that sediment cleanups and resource enhancement don't fit into the conceptual model used to come up with this rule.

So that's the problem. There is -- there are many different ways to deal with that problem. The waiver or variance process could be expanded to allow special consideration of cleanups or resource enhancement projects. You could apply the risk based on overall project management. I'm sure there are opportunities beyond that.

I want to propose a hypothetical problem in the rule: that a literal application would require for sediment cleanups, physical treatment. Under the Clean Water Act, the standard on dredge material is practicability, and you've got two different regulatory approaches.

If you're talking about cleanup of the sediment in the marine environment, feasibility is an element. And I can tell you from experience, very little contaminated sediment will be dredged if physical treatment rather than settling is going to be required.

Response to: CTRH-001-021

See response to CTR-007-002.

Comment ID: CTRH-001-059
Comment Author: Ellen Johnck
Document Type: Public Hearing
State of Origin: CA
Represented Org: Bay Planning Coalition
Document Date: 09/17/97
Subject Matter Code: C-23 Sediments/Dredged Materials
References:
Attachments? N
CROSS REFERENCES

Comment: I'm Ellen Johnck, director of the Bay Planning Coalition, a San Francisco Bay planning coalition organization, a membership organization of about 200 members that reflect the maritime industry, shoreline business and industry, several small and large property owners, recreational use and local governments and many counties and cities.

I am here today because I want EPA to understand the far-reaching effect of this particular California Toxics Rule on the broad range of recreational, commercial and environmental uses and users here in the estuary.

One of the major things that we have seen with this California Toxics Rule is that it affects our

international commerce and our trade, which is totally dependent on the navigation channel. We have to dredge about 4 to 5 million cubic yards of material each year from the channel in order to support the Bay's trade and economy.

What this rule will affect will be our terrific program that was initiated in the last several years to try to expand the reuse of dredge material for environmentalpurposes.

In corroborating Mr. McGrath's statements for the Port of Oakland, we discovered that our whole program to restore wetlands of the bay with dredge material actually will not be able to happen because of discharge limits, because the standard could not be met.

And we frankly think that the Environmental Protection Agency needs to look at the whole numeric criteria and how it was devised. It really is not as scientific as that could be, as we look at interaction with the Bay and the properties of the metals attached to it as sediment, therefore, making these metals not necessarily available and having an environmental effect.

So I think my point, number one, is that this -- and I really don't think EPA wants to deter the environment reuse of dredge material -- it will be exceeding the numeric criteria particularly for copper and will deter the environmental reuse of dredge material.

Response to: CTRH-001-059

See response to CTR-007-002.